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APPLICANT : NATL FOOD RES INST;

INVENTOR : KOBAYASHI SHOICHI;

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TITLE : CARBOHYDRATE-FATTY ACID COMPOSITE PRODUCED BY USING ORGANIC SOLVENT-SOLUBLE LIPASE AND ITS PRODUCTION

ABSTRACT : PURPOSE: To obtain the subject carbohydrate-fatty acid composite having excellent stability and useful for an emulsifier for food and a physical properties improver, etc., at a high yield by making an organic solvent-soluble lipase to act on a mixture of carbohydrate and fatty acid or oil and fat in the presence of an organic solvent.

CONSTITUTION: An organic solvent-soluble lipase is mixed with a carbohydrate such as monosaccharide, oligosaccharide, cyclodextrin and polysaccharide (e.g. glucose) and a mixture of a fatty acid such as a saturated fatty acid and an unsaturated fatty acid (e.g. palmitic acid) and/or an oil and fat such as a vegetable oil and an animal oil (e.g. soybean oil) in an organic solvent such as hexane, heptane, octane, isooctane, chloroform, ethyl acetate, acetone, benzene and petroleum ether, reacted in shaking at 37°C for 17hr, exsiccated in a reduced pressure at room temperature, separated into the resultant product and purified to obtain the objective carbohydrate-fatty acid composite (e.g. glucose-palmitate) having excellent stability and useful for an emulsifier for food and a physical properties improver, etc., in the field of a food, a medicine, a cosmetic and chemical industries, etc.

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